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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,840	11/08/2001	Duy Q. Nguyen	TI-30110	7621
23494	7590	07/28/2005	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			FOX, JAMAL A	
			ART UNIT	PAPER NUMBER
			2664	

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/007,840

Applicant(s)

NGUYEN ET AL.

Examiner

Jamal A. Fox

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12 is/are allowed.
- 6) ☒ Claim(s) 13, 14, and 17-20 is/are rejected.
- 7) ☒ Claim(s) 15 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/7/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it is not within the range of 50 to 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 13, 14, and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Walsh et al. (U.S. Patent No. 5,848,253).

Referring to claim 13, Walsh et al. discloses a method of providing access to a limited resource in a digital signal processing system, wherein the method comprises:

receiving one or more request signals (request signals, col. 19 line 51-col. 20 line 11) from a set of components of two (two pins, col. 19 line 51-col. 20 line 11) distinct types;

responsively asserting a grant signal (grant signals, col. 19 line 51-col. 20 line 11) to a selected component of a first type if the one or more request signals are each from components of the first type; and

responsively asserting a hold signal (hold, col. 19 line 51-col. 20 line 11) to each component of the first type if the one or more request signals include a request signal from a component of the second type.

Referring to claim 14, Walsh et al. discloses the method of claim 13, further comprising: if the one or more request signals included a request signal from a component of the second type: receiving assertions of hold acknowledge (Hold Acknowledge, col. 19 line 51-col. 20 line 11) signals from each of the components of the first type;

asserting a grant (grant, col. 19 line 60-col. 20 line 11) signal to a selected component of the second type after receiving said hold acknowledge signal assertions.

Referring to claim 17, Walsh et al. discloses the method of claim 13, wherein after asserting the request signal, the components of the first type monitor the grant signal for assertion, wherein the components of the first type access the limited resource after detecting said grant signal assertion, and wherein the components of the first type de-assert (col. 123, lines 40-45) the request signal after completing said access.

Referring to claim 18, Walsh et al. discloses the method of claim 13 wherein the components of the first type are processor cores (core, Fig. 36 ref. sign 702 and respective portions of the spec.).

Referring to claim 19, Walsh et al. discloses the method of claim 13, wherein the components of the second type are DMA controllers (DMA CTRL, Fig. 15 ref. sign 910 and respective portions of the spec.).

Referring to claim 20, Walsh et al. discloses the method of claim 13, wherein the limited resource is an external input/output port (input/output, col. 10 lines 55-61 and col. 22 lines 44-49) that can be used by only one of said components at a time.

5. Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Katsura et al. (U.S. Patent No. 5,717,440).

Referring to claim 13, Katsura et al. discloses a method of providing access to a limited resource in a digital signal processing system, wherein the method comprises:

receiving one or more request signals (request signal, col. 10 lines 27-50) from a set of components of two distinct types;

responsively asserting a grant signal (grant signal, col. 10 lines 27-50) to a selected component of a first type if the one or more request signals are each from components of the first type; and

responsively asserting a hold signal (hold signal, col. 10 lines 27-50) to each component of the first type if the one or more request signals include a request signal from a component of the second type.

Art Unit: 2664

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. Claim 13 is rejected under 35 U.S.C. 102(a) as being anticipated by

TMS320VC5421 Fixed-Point Digital Signal Processor Data Manual.

Referring to claim 13, TMS320VC5421 Fixed-Point Digital Signal Processor Data Manual discloses a method of providing access to a limited resource in a digital signal processing system, wherein the method comprises:

receiving one or more request signals (request, page 34 section 3.8.2) from a set of components of two distinct types;

responsively asserting a grant signal (grant, page 34 section 3.8.2) to a selected component of a first type if the one or more request signals are each from components of the first type; and

responsively asserting a hold signal (hold, page 34 section 3.8.2) to each component of the first type if the one or more request signals include a request signal from a component of the second type.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2664

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garde (U.S. Patent No. 5,611,075).

Referring to claim 13, Garde discloses a method of providing access to a limited resource in a digital signal processing system, wherein the method comprises:

receiving one or more request signals (request signal, col. 17 lines 17-29) from a set of components of two distinct types;

responsively asserting a grant signal (grant signal, col. 17 lines 17-29) to a selected component of a first type if the one or more request signals are each from components of the first type; and
responsively asserting a hold signal (hold signal, col. 17 lines 17-29), but does not explicitly teach of asserting a hold signal to each component of the first type if the one or more request signals include a request signal from a component of the second type. However, the hold signal can be asserted at any time the data buffer is empty or full. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included asserting a hold signal to each component of the first type if the one or more request signals include a request signal from a component of the second type to the invention of Garde in order to determine which component should obtain control of the external port as suggested by Garde (col. 18 lines 11-55).

Allowable Subject Matter

10. Claims 1-12 are allowed.

Art Unit: 2664

11. Claims 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

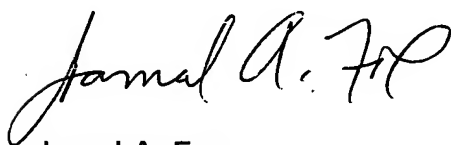
or faxed to:

♦ (571) 273-8300, (for formal communications intended for entry)


13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamal A. Fox whose telephone number is (571) 272-3143. The examiner can normally be reached on Monday-Friday 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to 2600 Customer Service whose telephone number is (571) 272-7268.



Jamal A. Fox



WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER